

Block Grants

Preventing Chronic Disease



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Prevention of Waterborne Disease

Producing Results

In 2003, corrective action taken by Alabama's Department of Public Health averted outbreaks of waterborne disease by eliminating contaminants in well water that threatened health. Now 96 percent of the state's water systems meet the federal drinking-water standards.

Public Health Problem

Of the private well-water samples routinely tested by the Alabama Department of Public Health, approximately 40 to 50 percent were contaminated with fecal coliforms, nitrates, and pesticides. Percentages for contamination were even higher for privately dug shallow wells that are less than 30 feet in depth and for water sources in rural and coastal areas. Failing septic tanks placed about 340,000 low-income persons in rural Alabama who use well water at risk for waterborne disease. During 2003-2004, Alabama received national media coverage when three low-income families were forced to live in tents in rural Lowndes County because a shared septic system failed. Significant costs are associated with the investigation and management of outbreaks of waterborne disease and with the medical treatment and lost productivity for those who become ill.

Taking Action

The Alabama Department of Environmental Management regulates and funds the protection of large municipal and community wells for drinking water and of persons who drill the wells, but it does not have funds to protect private wells that provide drinking water. Approximately \$109,000 of the state's PHHS Block Grant was used to develop a statewide monitoring system that enables the state to identify problems and take corrective action for both community wells and private wells. During 2003, program professionals undertook a number of steps, including: investigating and evaluating more than 150 failed septic tanks in sensitive areas statewide; working with each owner to repair every septic tank in accordance with the standards for sewage discharge; and conducting continuing education programs with the Alabama Onsite Wastewater Association, training more than 500 septic tank installers, pumpers, manufacturers, engineers, and surveyors in the proper installation of on-site sewage systems.

Implications and Impact

Alabama established a goal of no more than two outbreaks of waterborne disease per year. PHHS Block Grant funds enabled the state to investigate private wells and to review in real time the pathology findings for all samples of well water (both private and community) that were analyzed in the state clinical laboratories. This approach facilitated timely investigation and corrective action. The results included: no outbreaks of waterborne disease in 2003; and realizing a cost savings of \$280,000 per year for chemicals to treat the 780 community water systems. Above all, the citizens of Alabama were given the assurance that their health is a priority that is being protected.

Contact Information

Alabama Department of Public Health - PHHS Block Grant Coordinator
 201 Monroe Street, Suite 1010 - Post Office Box 303017-3017 - Montgomery, AL 36130-3017
 Phone: 334-206-5672 www.adph.org
<http://www.cdc.gov/nccdphp/exemplary>



Mississippi

Outbreak of Invasive Bacterial Meningitis Controlled

Producing Results

Careful monitoring and quick action, including timely and judicious administration of antimicrobial drugs and vaccinations to all close contacts of persons who had a confirmed or probable diagnosis of invasive bacterial meningitis, contained a serious outbreak of the disease. There were no fatalities, and no secondary cases were identified.

Public Health Problem

Within a nine-day period in February 2003, in a small town in Mississippi, six children aged 7-14 years had a confirmed or probable diagnosis of invasive bacterial meningitis. An infection of the spinal cord and fluid that surrounds the brain, bacterial meningitis is spread by exchange of respiratory and throat secretions. The disease has a fatality rate of 40 percent, and death often closely follows the onset of symptoms. In addition, bacterial meningitis profoundly affects the long-term health of survivors - 20 percent have permanent neurological deficits, including hearing loss, speech disorders, loss of limbs, mental retardation, and paralysis. Immediate identification and treatment of household members and persons who have had close contact with the patient are critical, because the risk of secondary transmission is 500-800 times greater for household members and close contacts than for the general population. .

Taking Action

The primary means of preventing secondary transmission of meningitis is timely and judicious use of antimicrobial drugs (antimicrobial chemoprophylaxis) by close contacts of infected persons. Mississippi's PHHS Block Grant provides \$170,000 in funds for diagnosis and treatment of meningitis. In this instance, determination of the pattern of disease outbreak was critical. The medical investigation indicated the following important findings: 1) All six persons with a diagnosis of invasive bacterial meningitis lived in a small town in Mississippi with a population of 15,000; 2) four of the six patients attended the same middle school; and 3) three of the six cases were confirmed by laboratory culture as serogroup C.

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Contact Information

Mississippi Department of Health - PHHS Block Grant Coordinator
570 East Woodrow Wilson Street - PO Box 1700 - Jackson, MS 39215-1700
Phone: 601-576-7111 www.msdh.state.ms.us
<http://www.cdc.gov/nccdphp/exemplary>



Mississippi

As a first step, the district epidemiology nurse, who started the investigation with the first patient, offered antimicrobial chemoprophylaxis to 85 close contacts. Rifampin was administered to 1,186 of the 1,384 students in the affected middle school and to 659 of the 786 students in affected elementary schools. After an additional four cases were detected through increased surveillance and after serogrouping was completed, meningococcal vaccine was obtained and offered to all students and staff in the affected school system.

Implications and Impact

Careful monitoring and quick action, including timely and judicious administration of antimicrobial drugs to all close contacts, and broad offering of vaccination throughout the affected school system, contained a serious outbreak. The case fatality rate was zero percent, and there were no secondary cases identified.

Contact Information

Mississippi Department of Health - PHHS Block Grant Coordinator
570 East Woodrow Wilson Street - PO Box 1700 - Jackson, MS 39215-1700
Phone: 601-576-7111 www.msdh.state.ms.us
<http://www.cdc.gov/nccdphp/exemplary>



Health Insurance Claims and Risk for Heart Disease and Diabetes

Producing Results

OKHealth, a program for the management of health risk and disease, reduced the risk for cardiovascular disease by 20 percent, the risk for diabetes by 11 percent, and health insurance claims by 14 percent.

Public Health Problem

As of 2002, Oklahoma ranks third in the nation for deaths due to heart disease and eighth in the nation for deaths due to diabetes. In hospitalizations alone, this high morbidity of these diseases costs Oklahoma residents more than \$2.5 billion annually for cardiovascular disease and \$600 million for diabetes.

Oklahoma also has the eighth highest prevalence rates for both diabetes and high blood pressure in the nation. The government of Oklahoma is the largest employer in the state, and the Oklahoma Benefits Council is responsible for brokering the benefits packages available to state employees. Among state employees, the overall costs for treating cardiovascular disease exceed \$50.5 million, and for diabetes, the costs are \$13.3 million.

Taking Action

The OKHealth pilot project is funded by the PHHS Block Grant over a 2-year period at \$150,000. OKHealth is a program for the management of health risk and disease that addresses the risks for developing cardiovascular disease and diabetes and manages the diseases to prevent further complications. The pilot project serves 969 state employees enrolled in the state health insurance plan.

As a first step, employees were assigned to groups that were stratified on the basis of disease diagnosis or risk factors. Using mentors and a Web-based, self-management program designed by a disease management company, participants entered the program to set and achieve goals for risk reduction and disease management based on a model for care of patients with chronic disease. Employee goals, outcomes, and health care standards were communicated to a health care provider to engage the provider in improving the quality of care. The desired outcome of the quality-improvement plan is to change the health benefits for state employees to address prevention of chronic disease and management of care for patients with chronic disease.

Implications and Impact

The results of this pilot project demonstrate improved health outcomes: the risk of cardiovascular disease was reduced by 20 percent, the risk of diabetes by 11 percent, and health insurance claims by 14 percent. The return on the investment was \$77.40 per employee per year (21 cents daily). The pilot study proved the intervention hypothesis, and steps are being taken to present the results, impact, and cost to the state legislature to leverage for changes in health coverage.

Contact Information

Oklahoma State Department of Health - PHHS Block Grant Coordinator
1000 NE 10th Street - Oklahoma City, OK 73117
Phone: 405-271-4072 ext 57123 www.health.state.ok.us
<http://www.cdc.gov/nccdphp/exemplary>



Elementary School Children “Go for the Gold”

Producing Results

Among participating schools, miles walked increased from 800,000 miles in 2001 to 2,692,429 miles in 2004 (equal to 5.4 round-trips to the moon). The percentage of schools in Utah with a policy of physical activity for 90 minutes per week for each child increased from 13 percent to 100 percent. Schools reported that the program was instrumental in decreasing violence on the playground, increasing attention in the classroom, and increasing interest in being physically active.

Public Health Problem

In Utah, as in the rest of the nation, approximately 25 percent of the children are overweight or at risk for being overweight (higher than the 85th percentile of standards on CDC's growth charts), and 12 percent are overweight (higher than the 95th percentile). Lack of policies and infrastructures to promote and support opportunities for physical activity and healthy nutrition are contributing to the epidemic of obesity among school-aged children. Utah used approximately \$175,000 of its PHHS Block Grant funds to support the Gold Medal School Initiative for elementary school children.

Taking Action

The Utah Department of Health, the Heart Disease and Stroke Prevention Program, the State Office of Education, and local health departments created the Gold Medal School Initiative. This elementary school incentive program helps schools adopt a healthy culture by making policy and environmental changes to receive funding for physical activity equipment or salad bars. Changes encourage more opportunities for physical activity during the school day and better nutrition and healthier food choices.

Schools are given a menu of award criteria to achieve, including: establishing a Gold Medal Mile track on or near school grounds, and setting a goal for student participation (at least 1 mile per week for each child); setting a policy for at least 90 minutes of structured physical activity for each student per week; and offering salad bars, providing more nutritious food choices in school stores and in the cafeteria, and limiting choices in vending machines to healthy items. Evaluation of the impact on obesity will begin in year four of the initiative - the first three years were needed to develop policies and change the school environments.

Implications and Impact

During school years 2001-2004, the following accomplishments were achieved: 1) the number of schools participating increased from 50 to 138; 2) nonfood incentives and rewards have been offered to students by 3,039 teachers; and 3) schools report that new healthy policies and environmental supports (about 10 per school) have been instrumental in decreasing violence on the playground and waste of food and in increasing attention in the classroom, participation in school lunch, and interest in being physically active.

Contact Information

Utah Department of Health - PHHS Block Grant Coordinator
 288 North 1460 West - Salt Lake City, UT 84116
 Phone: 801-538-6220 www.health.utah.gov
<http://www.cdc.gov/nccdphp/exemplary>